ZipDX®

April 1, 2011

Via ECFS

Marlene Dortch
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Dockets WC 10-90, GN 09-51, WC 07-135, WC 05-337, CC 01-92, CC 96-45, WC 03-109

Dear Ms. Dortch:

We submit these comments regarding the recently-issued NPRM in the above-referenced dockets.

This letter addresses the NPRM's requests for comment regarding Access Stimulation, Phantom Traffic and interim ICC treatment of VoIP traffic. We believe that the ultimate resolution of many issues will come only with comprehensive ICC reform.

ZipDX is an audio-conferencing service provider, and is neither a carrier nor an interconnected VoIP provider. However, ZipDX competes in the marketplace with "free conferencing services" that are partially or fully funded by access revenues. ZipDX pays, through our wholesale arrangements with carrier partners, access charges for originating toll-free traffic, and we also pay access charges for terminating traffic. And, in addition to PSTN access, ZipDX allows conference participants to connect via SIP (VoIP). ZipDX is unique in supporting conference connections via all these modalities (PSTN toll-free, PSTN dial-out, and VoIP in & out). We also make extensive use of calling-line identification. We have a vested interest in many aspects of this NPRM.

We are pleased with the Commission's commitment to address festering issues in this domain and believe that near-term action is imperative, even if it does not address every aberrant aspect of the current situation. Nonetheless, we offer the following thoughts as potential refinements to the near-term proposals in the NPRM.

INTERCARRIER COMPENSATION OBLIGATIONS FOR VOIP TRAFFIC

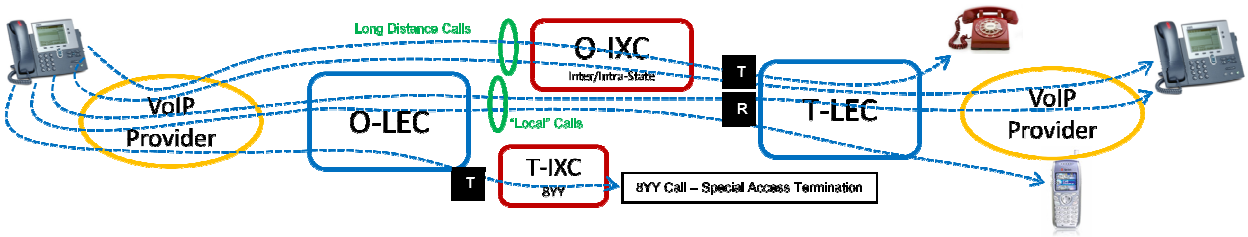
We do not see a practical mechanism whereby the Commission can "exempt" VoIP-originated traffic from paying otherwise-properly assessed inter-carrier charges. While we are not anxious to see additional regulation applied to VoIP, we do think it makes sense to clarify that absent any private agreement to the contrary, properly tariffed inter-carrier charges apply regardless of the "far-end" protocol.

ICC for VoIP is nuanced by the specific categorization of the entities involved, and the different ways in which traffic is exchanged.

Inter- and intra-state access charges are generally assessed by terminating local exchange carriers (T-LEC) on interexchange carriers (IXC) that deliver traffic originated from other local exchange carriers (O-LEC).

Any given call might be a "VoIP call" at one end or the other or both. The provider of the VoIP service (Interconnected VoIP Provider, IVP) could be an independent service connected through a T-LEC or O-LEC, or it could be integrated as part of (or an affiliate of) the T-LEC or O-LEC. In some cases, there may be no O-LEC; the IVP may connect directly to an IXC to deliver outbound calls. Or, the IVP may use a variety of O-LEC's, selecting on a call-by-call basis to make the connections appear "local."

This diagram attempts to show some of the possibilities, with the black blocks indicating where ICC (T for terminating access and R for reciprocal compensation) might be assessed:



And the IXC might be a stand-alone entity, or it might be part of, or affiliated with, the T-LEC or O-LEC. If all of these providers (IXC, O-LEC, T-LEC, IVP's) are in fact part of the same entity, or part of entities that have negotiated private agreements, then compensation among them is not deserving of regulatory attention.

However, part of the power of the telephone network is its ubiquity and interoperability. Regulations that facilitate interconnection without requiring bilateral agreements can keep the administrative burden from growing exponentially as the network expands.

Along with the different "categories" of providers, we have different calling scenarios. A call might be:

VoIP-to-PSTN, or

PSTN-to-VoIP, or

VoIP-to-VoIP (but connected via the "PSTN")

The "VoIP" might be:

a conventional POTS telephone that is "IP-connected", or

a business telephone extension off a premises-based or hosted IP-PBX, or

a "soft-phone" application installed on a desktop computer, laptop, tablet, or smartphone.

There is some suggestion in the NPRM that the ICC rules should be modified (or "clarified") to provide access charge "exemptions" for some of these cases (¶ 610).

Regardless of whether an exemption makes regulatory sense, it is simply not practical in today's world. The NPRM asks: "Could terminating carriers identify interconnected VoIP traffic" (¶ 613) and the short answer is no. The T-LEC, which is responsible for generating access charge billing records, cannot "know" how the call was originated. By the time the call reaches the T-LEC, especially if it is delivered through an intermediate carrier, the identity of the originating carrier and the originating call type are unknown.

Our best suggestion to identify VoIP calls, if it were necessary to do so, would be to define some special value range for the "Charge Number" that is included in the call signaling. However, this would require changes to many switching, routing and billing systems, and is probably not practical given that this is an interim situation until broader ICC reform.

What IS practical is to eliminate access charges for calls TERMINATING to VoIP. We note that CMRS providers are prohibited from tariffing access charges (but calls FROM wireless phones that terminate to eligible endpoints DO pay access charges). VoIP providers could exist under similar rules; that would be an interesting step toward eliminating access charges. While "asymmetric" (see NPRM at ¶ 613), this solution seems to work for a quarter of a billion wireless subscriptions, and could serve as the interim model for VoIP as well.

We have just discussed inter- and intra-state access charges. Reciprocal compensation is the other type of ICC and it applies to local traffic. Technically, the situation is simpler, because there normally is not an IXC involved. Traffic goes directly between the O-LEC and the T-LEC.

Still, when any given LEC serves both VoIP and "non-VoIP" customers, there is no way for the "other end" to discern, with certainty, whether the opposite end of the call is VoIP or not. However, there is nothing that prevents pairs of LECs from negotiating their own agreements about compensation for these calls, and such agreements already exist for many neighboring or overlapping local carriers.

We see no practical, near-term way to provide a regulatory exemption from ICC charges (or a different ICC charge) JUST for certain calls associated with a given carrier. Allowing a carrier to exempt itself from PAYING access charges, when the terminating carrier provides similar services to others for a fee, seems fraught with peril.

Our examples above have not mentioned the role of an ILEC tandem (or a third-party tandem services provider) in addition to all the other parties involved in the food chain. This further complication only makes it less likely that you could find a tenable way to single out last-mile VoIP calls for special treatment.

There is ample evidence that some VoIP providers are mis-labeling and mis-routing their traffic to take advantage of varying access charges associated with different jurisdictions. This is not unique to VoIP, and is addressed in the NPRM "Phantom Traffic" discussion. Perhaps the biggest immediate issue with VoIP traffic is not whether ICC applies, but under what jurisdiction (and how to make that consistent).

As noted in the NPRM, we should eliminate regulations that continue to promote TDM interconnection and fail to encourage more efficient IP-based interconnection (footnote 914). We will offer suggestions in our separate comments on long-term ICC reform.

To summarize on VoIP, we believe:

- From an ICC perspective, "VoIP calls" should not get unique treatment just because they are "VoIP."
- Providers of service to VoIP endpoints should be similar to CMRS providers and should not be permitted to file access tariffs (or, if "mixed use," their VoIP traffic should be excluded from their access tariff).
- Significant energy should not be diverted from long-term ICC reform to address interim rules for VoIP.

RULES TO ADDRESS PHANTOM TRAFFIC

We are supportive of the proposed rules regarding the population and handling of the SS7 CPN and CN fields (Appendix B).

The proposal states, in part, that the originating provider is "required to transmit the telephone number received from, or assigned to or otherwise associated with the calling party…." (Proposed 64.1601 (a)(1))

The rule should be clarified to mandate that originating providers MUST populate CPN with a VALID, dialable number that identifies the party responsible for originating the call. In other words, it shouldn't be permissible to put a call onto the network with "000000000" or some other non-dialable number as the CPN. If a provider receives a call from an originating customer with a missing or invalid CPN, the provider should be required to substitute a valid call-back number for (the number "assigned to") that customer, or the provider must populate a dialable number of its own and take responsibility for the call.

Certain providers (and their customers) seem to use the "excuse" of "technological limitations" that prevent them from sending a valid CPN. That's nonsense, given that CPN is now decades old. Even if the end-customer is using a cord-board PBX and pulse-dialing to place calls, their carrier should insert an appropriate call-back number.

Mandating a valid CPN in all cases would further address billing issues and help with dispute resolution. It would provide value to the end-customer receiving the call, aid in limiting nuisance and harassment calls, and complement recent legislation and pending rules regarding Truth in Caller-ID.

We must note, however, that clinging to CPN as the key to jurisdictional issues is a lost cause. As noted in Verizon's White Paper referenced in the NPRM (footnote 950), "valid" handling of CPN still leaves gaping holes in determining the geographic location of call origin and termination. The best example is mobile telephony: "roaming" subscribers are routinely making "local" calls that look like "long distance" calls, and "intra-state" calls that look like "inter-state" calls, based on CPN. With a huge fraction of calls being mobile at one end or the other, the likelihood of CPN-based jurisdictional determination being accurate is becoming increasingly remote.

Regulators need to move towards schemes that recognize this technical reality, and also realize that users of these services DO NOT CARE about jurisdictional boundaries. Eliminating jurisdictional distinctions would also greatly simplify the regulatory burden placed on the affected applications.

While many types of traffic are characterized as "phantom," VoIP calls are a significant fraction. This is in part because the origin of the calls is unclear (they come from "anywhere on the internet"), the physical location of the VoIP user is unknown, and some VoIP providers are particularly good at gaming the system. As long as different ICC rates apply for different categories of traffic, games will be played.

Calls placed by carriers on behalf of "Interconnected VoIP" subscribers should always include that subscriber's telephone number (as either CPN or CN). For calls originated as "Non-Interconnected VoIP" the CPN (or CN, if present) should reflect the true location of the originator, if known. If not known, then the CPN/CN should be set to reflect an interstate call. For Non-Interconnected VoIP, the CPN/CN should not be manipulated to represent the call as "local."

RULES TO REDUCE ACCESS STIMULATION

We are supportive of the proposed rules to reduce access stimulation. We offer the following observations and potential clarifications.

The NPRM discusses toll-free ("8YY") calls (footnotes 781 and 1024). From an ICC perspective, these calls are analogous to conventional calls, but some elements are "reversed." The ORIGINATING carrier assesses an access charge on the IXC, and also includes a "dip charge" associated with determining the appropriate carrier for the call via a query to the SMS/800 database. ICC arbitrage associated with 8YY calls is wasteful, expensive, and improper.

The NPRM does not discuss the various "rate elements" that are associated with access stimulation, and the "gaming" that goes on with respect to elements such as tandem and mileage charges.

The telecommunications industry has long embraced a family of techniques called "least cost routing," whereby algorithms of varying complexity and incorporating various inputs are used to determine the most efficient (and thus "least cost") way to route a call from its origin point to its termination. LCR can involve on-the-fly comparison of one carrier's rates versus another; an assessment of the number of "hops" that a call might traverse via one path versus another; or other factors.

What has emerged in the domain of access stimulation is "most cost routing" – finding the path that will incur the greatest access expense, and thus maximize compensation for the collector of access charges.

MCR is despicable. It can involve inserting unnecessary elements into a call path (such as a tandem switch), just so that the additional access charges (such as tandem switching) can be assessed (footnote 1091). It can also involve directing that a call be routed to a distant location, only so that additional mileage charges can be assessed in order to haul the call back to where it belongs. It can involve routing a call to a region that allows for assessment of higher charges than what would be allowed in the "real" geographic location of the endpoint.

We recognize that it is impossible to address all the possible abuses in a short period of time, and have stated that we prefer a partial but substantive solution NOW versus further delay looking for the ideal. (That will, hopefully, come with long-term ICC reform.) However, we submit the following items for consideration:

The NPRM proposes a definition of "Access revenue sharing:" "Access revenue sharing occurs when a rate-of-return ILEC or a CLEC enters into an access revenue sharing agreement that will result in a net payment to the other party (including affiliates) to the access revenue sharing agreement, over the course of the agreement." (Appendix C, proposed 61.3 (aaa))

This definition is circular, because it refers to an "access revenue sharing agreement" which is not otherwise defined.

We would propose: "Access revenue sharing occurs when a rate-of-return ILEC or CLEC enters in an agreement with another party (including an affiliate) that results in the aggregate fees owed to the ILEC or CLEC by the other party DECREASING as the volume of access-fee-generating traffic attributable to that other party INCREASES (including to the point that the other party is receiving a net payment from the ILEC or CLEC)."

The point here is not that the RATE goes down as volume goes up (that would be justifiable), but rather that in TOTAL, the other party is getting charged less (or being paid more) with higher traffic volume. The existence of such an agreement indicates that the carrier's access charges are allowing it to recover more than its "cost plus a reasonable rate of return." Thus, it makes sense to cap that carrier's per-minute access charges at a level (the RBOC rate) that does not include a "differential" intended as an actual-cost offset.

Also we would like the Commission to mandate that: "Under its access tariff, a carrier will not assess more than the amount associated with the lowest-cost, technically feasible, available path to complete the call. A carrier will not charge for superfluous elements included to inflate the access charge."

This clarification would still permit collection of access elements necessitated by congestion or failure.

Further, we would like the Commission to mandate that: "A carrier will not route calls, or cause calls to be routed, in a manner solely to inflate the access charges collectable from others, when a technically feasible alternate routing is available to that carrier without incurring additional cost for itself (if not for the differential access charges)."

This clarification does not require a carrier to itself incur additional cost in order to reduce access charges for others. But when examining its own costs, the carrier must exclude "rebates" or other consideration associated with those access charges.

CONCLUSIONS

NPRM proposals for Phantom Traffic and Access Stimulation are necessary and should move forward. We make the following specific suggestions to make them even more compelling, eliminating additional current and potential abuses.

1. Appendix B, Call Signaling Rules, should be clarified to mandate that Originating Providers must:
    - Populate CPN with a VALID, dialable number associated with the party responsible for originating the call.
    - For Interconnected VoIP, use the subscriber's assigned telephone number in ALL originating messages for that subscriber (either as the CPN, or if the CPN is set to something different, the CN).
    - For Non-Interconnected VoIP, populate the CPN (or CN, if CPN is something different) to reflect the actual location of the calling party, if known; otherwise, to a value reflecting an interstate call.
2. Appendix C, Access Stimulation Rules, definition of Access Revenue Sharing should be revised to: "Access revenue sharing occurs when a rate-of-return ILEC or CLEC enters in an agreement with another party (including an affiliate) that results in the aggregate fees owed to the ILEC or CLEC by the other party DECREASING as the volume of access-fee-generating traffic attributable to that other party INCREASES (including to the point that the other party is receiving a net payment from the ILEC or CLEC)."
3. Appendix C should include: "Under its access tariff, a carrier will not assess more than the amount associated with the lowest-cost, technically feasible, available path to complete the call. A carrier will not charge for superfluous elements included to inflate the access charge."
4. Appendix C should include: "A carrier will not route calls, or cause calls to be routed, in a manner solely to inflate the access charges collectable from others, when a technically feasible alternate routing is available to that carrier without incurring additional cost for itself (if not for the differential access charges)."

There is an opportunity to clarify ICC for VoIP. It is not practical or defensible, in the current implementation of ICC, to mandate an "exemption" for VoIP. VoIP providers should be classified similarly to CMRS providers. VoIP providers should be required to properly label their VoIP-originated calls. Longer-term reform of ICC must explicitly address and encourage VoIP.

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